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07/683,016 04/10/91 NGUYEN

H 82-277501P2

EXAMINER

MAI, N

ART UNIT

PAPER NUMBER

2204

DATE MAILED:

RICHARD C. STEWART, II
ALLIED-SIGNAL INC.
P. O. BOX 2245
MORRISTOWN, NJ 07962

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

JAN 28 1993

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 6 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice re Patent Drawing, PTO-948.
- ☒ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, Form PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

- ☒ Claims 1-27 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
- ☐ Claims _____ have been cancelled.
- ☐ Claims _____ are allowed.
- ☒ Claims 1-27 are rejected.
- ☐ Claims _____ are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.
- ☐ This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
- ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).
- ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____

- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

- ☐

This document contains information under
SECURITY ORDER, as defined in 38 USC 41-18a.
Unauthorized disclosures subject to Civil
and Criminal Sanctions.

EXAMINER'S ACTION

Serial No. 07/683,016

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Art Unit 2204

1. Claims 2 and 6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, line 3, "8J/g" should be --8j/g--.

In claim 6, line 5, the value for energy-to-break is missing.

2. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

3. Claims 1-27 are rejected under 35 U.S.C. 103 as being unpatentable over Li et al. in view of Dunbar and Ancker '116.

Li et al. disclose a ballistic resistant composite comprising layers of fibrous materials in a rigid matrix having the characteristics substantially as claimed. Li et al. in col. 9, line 7+ teach the matrices can be thermoplastic or thermosetting resin of the types claimed by the applicants. While Li et al. do not teach the combination of these two resins, using matrices formed of thermoplastic and thermosetting resins would have been obvious since it is known to use such combination for forming a preformable mat. See Dunbar.

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Art Unit 2204

Ancker discloses using a compatibilizing system to give a homogeneous and good mechanical properties to different types of thermoplastic materials when blending together. Based on this teaching it would have been obvious to one skilled in the art to form the matrix system of Li et al. using the mixtures taught by Dunbar and the Ancker's compatibilizing system for the noted improvement. Determination of an optimum or preferred amount of compatibilizing system used to obtain desired results is within the skilled in the art.


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ngoclan Mai whose telephone number is (703) 308-0431. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0511.

Mai/msw-3
12-29-92

Ngoclan Mai

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12-29-92
AMT


DONALD P. WALSH
SUPERVISORY PATENT EXAMINER
GROUP 2200